

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Canceled)

2. (Currently amended) The linear type actuator as set forth in claim 4, wherein said conversion means is configured with a plurality of straight sides and has corners thereof rounded.

Claim 3 (Canceled)

4. (Currently amended) ~~The A~~ linear actuator as set forth in claim 1 comprising:

a stator unit having coils, obtained by a winding of a magnet wire arranged on a stator yoke, and pole teeth arranged on an inner periphery of the stator unit;

a rotor unit rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth, said rotor unit including a field magnet arranged on an outer periphery of a resin portion made of a resin material and conversion means arranged on a portion of an inner periphery of said resin portion;

said conversion means being made of a material having a small friction coefficient and sufficient abrasion resistance, and said rotor unit being integrally constituted by insert molding said field magnet and said conversion means;

wherein magnet stoppers are arranged on both end faces of said field magnet by an insert molding process; and,

an output shaft having a screw thread on at least a portion of an outer periphery of said output shaft for engaging with said conversion

20 means, said output shaft disposed in the central portion of said rotor unit so as to be slidable in an axial direction thereof.

5. (Currently amended) The linear actuator as set forth in claim ~~4~~ 4, wherein said conversion means comprises a hexagon shaped nut.

6. (Currently amended) The linear actuator as set forth in claim ~~4~~ 4, wherein said conversion means comprises a square shaped nut.

7. (Currently amended) The linear actuator as set forth in claim ~~4~~ 4, wherein said conversion means comprises a spline shaped nut.

8. (Currently amended) A linear actuator, comprising:

a stator unit having coils, obtained by a winding of a magnet wire arranged on a stator yoke, and pole teeth arranged on an inner periphery of the stator unit;

5 a rotor unit rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth, said rotor unit including a field magnet arranged on an outer periphery of a resin portion made of a first resin material and conversion means made of a second resin material arranged on at least a portion of an inner periphery of said
10 resin portion, wherein said second resin material is different from said first resin material; and;

an output shaft having a screw thread on at least a portion of an outer periphery of said output shaft for engaging with said conversion means, said output shaft disposed in the central portion of said rotor
15 unit so as to be slidable in an axial direction thereof;

wherein ~~said conversion means is made of a material having a small friction coefficient and sufficient abrasion resistance, said rotor unit is integrally constituted by insert molding said field magnet and said conversion means, and said conversion means is made of a material~~
20 ~~which is different from the material of said resin portion.~~

9. (Previously presented) The linear actuator as set forth in claim 8, wherein said first resin material comprises polybutylene telephthalate, and said second resin material comprises polyphenylene sulfide.

10. (Currently amended) ~~The~~ A linear actuator ~~as set forth in claim 8~~ comprising:

5 a stator unit having coils, obtained by a winding of a magnet wire arranged on a stator yoke, and pole teeth arranged on an inner periphery of the stator unit;

a rotor unit rotatably disposed in a central portion of said stator unit with a given gap opposing said pole teeth, said rotor unit including a field magnet arranged on an outer periphery of a resin portion made of a first resin material and conversion means made of a second resin material arranged on at least a portion of an inner periphery of said resin portion, said second resin material being different from said first resin material; and;

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an output shaft having a screw thread on at least a portion of an outer periphery of said output shaft for engaging with said conversion means, said output shaft disposed in the central portion of said rotor unit so as to be slidable in an axial direction thereof;

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said conversion means being made of a material having a small friction coefficient and sufficient abrasion resistance, said rotor unit being integrally constituted by insert molding said field magnet and said conversion means; and

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~~wherein~~ magnet stoppers are arranged on both end faces of said field magnet by an the insert molding process.

11. (New) The linear actuator as set forth in claim 8, wherein said conversion means is made of a material having a small friction coefficient and sufficient abrasion resistance.